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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/648,540

08/28/2000

Alexander D. Schapira

246/214

7789

23639

7590

01/25/2005

BINGHAM, MCCUTCHEN LLP  
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SAN FRANCISCO, CA 94111-4067

EXAMINER

ORTIZ RODRIGUEZ, CARLOS R

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/648,540	SCHAPIRA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Carlos Ortiz-Rodriguez	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/01/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-7 and 9-13 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8 is/are rejected.
- 7) ☒ Claim(s) 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/26/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 11/01/2004 have been fully considered. It should be noted that claims were examined with respect to elected figure 4. However, applicant does not provide any reason why the election is with traverse. A clear explanation is required. It should be also noted that claims 1-18 are not generic.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Correction of the following is required: Claims 14 and 17 include the term "analog/ digital", such term was not found in the specification.

### ***Allowable Subject Matter***

3. Claims 3-7 and 9-13 are allowed.

4. Claims 14 and 17 would be allowable if rewritten to overcome the objection set forth in this Office action.

5. Claims 15-16 and 18 would be allowable if rewritten to overcome the objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballam U.S Patent No. 6,560,757 in view of Butts et al. U.S. Patent No. 5,036,473.

Regarding claims 1, 2 and 8 Ballam discloses a circuit design simulator, comprising:  
a stored electronic representation of a circuit design (C14 L13-34),  
said circuit design including at least one interface between a digital circuit and an analog circuit,  
said interface comprising a node at which said digital circuit provides an output and at which  
said analog circuit receives an input and provides a conditional output (C10 L7-19),  
said output taking on any one of several states including a digital high state, digital low state, or a high impedance state (C10 L29-32 and C2 L61-67).

But Ballam fails to clearly specify a processor dynamically determining whether or not to apply each conditional output to its respective node according to the state of the digital circuit output connected to the node.

However Butts et al. disclose at least one processor for simulating operation of said circuit design, said at least one processor dynamically determining whether or not to apply each conditional output to its respective node according to the state of the digital circuit output connected to the node (C40 L32-50 and C41 L1-16).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by Ballam and combining it with the invention disclosed by Butts et al. The results of this combination would lead to method and system for simulation of digital/analog interfaces with analog tri-state ioputs.

One of ordinary skill in the art would have been motivated to do this modification because is common in this art to use processors for simulating and determining as disclosed by Butts et al.

#### *Citation of Pertinent Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to method and system for simulation of digital/analog interfaces with analog tri-state ioputs:

- a. U.S. Pat. No. 4,092,639 to Schoeff, which discloses digital to analog converter with complementary true current outputs.
- b. U.S. Pat. No. 4,618,851 to Watanabe, which discloses apparatus for reproducing signals pre-stored in a memory.
- c. U.S. Pat. No. 6,100,830 to Dedic, which discloses differential switching circuitry.

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- d. U.S. Pat. No. 6,785,642 to Ballam, which discloses a method of converting data.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is (571) 272-3747. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The central official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

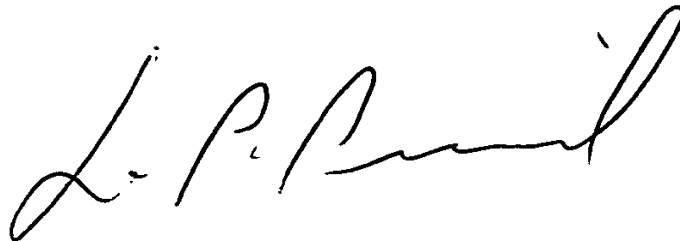
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703)308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Carlos Ortiz-Rodriguez  
Patent Examiner  
Art Unit 2125



cror

January 24, 2005

**LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**